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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/961,020	09/21/2001	Hiroaki Kubo	JP920000259US1	5130

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EXAMINER	
FLETCHER, JAMES A	

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 10/01/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/961,020	KUBO ET AL.	
	Examiner	Art Unit	
	James A. Fletcher	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 October 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *22 Feb 01*/5
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Please include the new Art Unit 2616 in the caption or heading of any written or facsimile communication submitted after this Office Action because the examiner, who was assigned to Art Unit 2615, will be assigned to new Art Unit 2616. Your cooperation in this matter will assist in the timely processing of the submission and is appreciated by the Office.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al (6,628,890), in further view of Thomason et al (6,018,612)

Regarding claims 1 and 9, Yamamoto et al disclose an apparatus and method for recording and reproducing digital data, comprising:

- receiving means for receiving first compressed data composed of a plurality of packets, the first compressed data including a plurality of programs

multiplexed in a time division manner (Col 4, lines 57-63 "The demodulation/error correction unit 2 performs demodulation and error correction for the bitstream input from the tuner 1, converts the same into a transport stream [TS] defined by MPEG2 system, and output the TS to the demultiplexer unit 3. The demultiplexer unit 3 demultiplexes an audio or video PES packet of one program from the TS input");

- data separating means for extracting specific compressed audio/video data corresponding to a desired program from the first compressed data received by the receiving means (Col 4, lines 62-64 "The demultiplexer unit 3 demultiplexes an audio or video PES packet of one program from the TS input");
- record control means for generating second compressed data including the compressed audio/video data extracted by the data separating means (Col 4, line 67 -Col 5, line 2 " The PES packet storage block 8 records the audio or video PES packet input from the demultiplexer unit 3, in the A/V-HDD1");
- recording means for recording the second compressed data generated by the record control means (Col 1, lines 7-8 "digital recording/reproduction apparatus");
- data reproducing means for decoding the compressed audio/video data included in the second compressed data (Col 5, lines 23-26 "The reproduction device 32 comprises...an A/V decoder 24"); and

- Yamamoto et al do not disclose a means for controlling the transmitting and reading of the data to and from the recording means in a time division manner.

Thomason et al disclose an apparatus for recording and reproducing digital data comprising a time division control means for controlling the transmitting and reading of the second compressed data to and from the recording means in a time division manner (Col 4, lines 43-51 "Data arrives at the input terminal 50...but as the disk in the main memory 36 may be temporarily busy for another operation, the data arriving will be buffered in an input buffer 35a... As soon as the disk is capable of receiving the data, the data stored in the input buffer 35a is...applied to the input 54 of the main memory 36, for storage on the disk" and Col 4, lines 53-56 "Data will also be regularly requested from the main memory disk 36 to be displayed on the TV screen. Again the disk may be temporarily busy for another operation. Data is stored in the output buffer 35b is now supplied to the output 51b, and thus applied to the output terminal 53").

As taught by Thomason et al, time division multiplexing of a read/write head allows for apparent simultaneous recording and reproduction, which improves the performance of the recording and reproducing apparatus and increases its value to the user.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yamamoto to provide for time division multiplexing of a single read/write head on the main memory.

Regarding claim 15, Yamamoto et al disclose an apparatus for recording and reproducing digital data, comprising:

- a receiver for receiving first compressed data composed of MPEG2_TS data, the first compressed data including a plurality of programs multiplexed in a time division manner (Col 4, lines 57-63 "The demodulation/error correction unit 2 performs demodulation and error correction for the bitstream input from the tuner 1, converts the same into a transport stream [TS] defined by MPEG2 system, and output the TS to the demultiplexer unit 3. The demultiplexer unit 3 demultiplexes an audio or video PES packet of one program from the TS input");
- a filter for extracting specific compressed audio/video data corresponding to a desired program from the first compressed data received by the receiver (The demultiplexer unit 3 demultiplexes an audio or video PES packet of one program from the TS input");
- a data unloader for generating second compressed data composed of MPEG2-PES data including the compressed audio/video data extracted by the filter (Col 4, line 67 -Col 5, line 2 " The PES packet storage block 8 records the audio or video PES packet input from the demultiplexer unit 3, in the A/V-HDD1");

- a recorder for recording the second compressed data generated by the data unloader (Col 1, lines 7-8 "digital recording/reproduction apparatus");
- a decoder for decoding the compressed audio/video data included in the second compressed data (Col 5, lines 23-26 "The reproduction device 32 comprises...an A/V decoder 24"); and
- Yamamoto et al do not disclose a means for controlling the transmitting and reading of the data to and from the recording means in a time division manner.

Thomason et al disclose an apparatus for recording and reproducing digital data comprising a time division control means for controlling the transmitting and reading of the second compressed data to and from the recording means in a time division manner (Col 4, lines 43-51 "Data arrives at the input terminal 50...but as the disk in the main memory 36 may be temporarily busy for another operation, the data arriving will be buffered in an input buffer 35a... As soon as the disk is capable of receiving the data, the data stored in the input buffer 35a is...applied to the input 54 of the main memory 36, for storage on the disk" and Col 4, lines 53-56 "Data will also be regularly requested from the main memory disk 36 to be displayed on the TV screen. Again the disk may be temporarily busy for another operation. Data is stored in the output buffer 35b is now supplied to the output 51b, and thus applied to the output terminal 53").

As taught by Thomason et al, time division multiplexing of a read/write head allows for apparent simultaneous recording and reproduction, which improves the performance of the recording and reproducing apparatus and increases its value to the user.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yamamoto to provide for time division multiplexing of a single read/write head on the main memory.

Regarding claims 2 and 10, Yamamoto et al disclose an apparatus and method for recording and reproducing digital data wherein the first compressed data is MPEG2-TS data and the second compressed data is MPEG2-PES data (Col 7, lines 22-24 "The demultiplexer unit 3 demultiplexes, from the input TS, an audio or video PES packet...and outputs the PES packet").

Regarding claims 3, 11, and 16, Yamamoto et al disclose an apparatus and method for recording and reproducing digital data wherein a plurality of the MPEG2-PES data is recorded by the recording means as one stream of data (Col 7, lines 27-29 "the PES packet storage block records the audio or video PES packet output by the demultiplexer unit 3, in the A/V-HDD").

Regarding claim 4, 13 and 17, Yamamoto et al disclose an apparatus for recording and reproducing digital data comprising reproduction control means for reading the second compressed data from the recording means and transmitting the second compressed data to the data reproducing means (Col 8, line 66 - Col 9, line 4 "the navigation control block 22 instructs the data transfer to the PES packet reading

block 21 according to an available space in the PES packet buffer 23. The PES packet reading block 21 extracts an audio or video PES packet from the A/V-HDD 1 (10), and output the PES packet data to the PES packet buffer 23").

Regarding claims 5, 14, and 18, Yamamoto et al disclose an apparatus for recording and reproducing digital data comprising monitoring means for monitoring the amount of data transmitted from the reproduction control means to the data reproducing means (Col 8, line 66 - Col 9, line 1 "the navigation control block 22 instructs the data transfer to the PES packet reading block 21 according to an available space in the PES packet buffer 23").

Regarding claims 6 and 19, Yamamoto et al disclose an apparatus for recording and reproducing digital data comprising selecting means for selectively transmitting the compressed audio/video data extracted by the data separating means to the data reproducing means (Col 5, lines 28-31 "The user interface control block 25 receives a playback command for normal play or trick play, entered by a user, and outputs the entered playback command for normal play or trick play to the navigation control block 22").

Regarding claim 7, Yamamoto et al disclose an apparatus for recording and reproducing digital data comprising video data decoding section and audio data decoding section for decoding the compressed video data and compressed audio data, respectively, in the data reproducing means (Col 5, lines 53-56 "The A/V decoder 24 decodes the audio or video PES packet data input by the PES packet buffer 23, and

outputs the video data to the digital encoder 26 and the audio data to the audio DAC 27, respectively").

Regarding claims 8 and 20, Yamamoto et al disclose an apparatus for recording and reproducing digital data wherein the recording means is a hard disk (Col 1, lines 6-10 "a digital recording/reproduction apparatus for recording/reproducing digital image data which is high-efficiency coded, to/from a random access recording medium such as an A/V-HDD (Audio/Video-Hard Disk Drive)").

Regarding claim 12, Yamamoto et al disclose a method for recording and reproducing digital data wherein a plurality of the MPEG2-PES data is recorded as one stream of data in the order in which the compressed audio/video data is received by the receiving means (Col 7, lines 22-29 "The demultiplexer unit 3 demultiplexes, from the input TS, an audio or video PES packet of one program to be recorded in the recording medium 30, and outputs the PES packet to...the PES packet storage block 8... The PES packet storage block 8 records the audio or video PES packet output by the demultiplexer unit 3, in the A/V-HDD").

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Fletcher whose telephone number is (703) 305-3464. The examiner can normally be reached on 7:45AM - 5:45PM M-Th, first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached at (703) 305-4380.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only).

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

JAF
September 22, 2004

VINCENT BOCCIO
PRIMARY EXAMINER